UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/820,699	03/30/2001	Hiroshi Akada	35.C15243	8784

5514 7590 09/10/2002

FITZPATRICK CELLA HARPER & SCINTO
30 ROCKEFELLER PLAZA
NEW YORK, NY 10112

EXAMINER	
NGUYEN, MICHELLE P	
ART UNIT	PAPER NUMBER
2851	

DATE MAILED: 09/10/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/820,699	AKADA, HIROSHI	
	Examiner	Art Unit	
	Michelle Nguyen	2851	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 July 2002* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-17* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *08 July 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,011,925 to Hosoe in view of U.S. Patent No. 5,223,872 to Stiepel et al. and U.S. Patent No. 4,945,367 to Blackshear.

With regard to claims 1 and 4, Hosoe discloses a movable camera apparatus (image input apparatus 1) comprising:

a camera unit (camera unit 10) (see Fig. 3);

a pan head (electric pan head 20) comprising a movable portion and a fixed portion (see Fig. 3; Examiner interprets the top surface of the electric pan head 20 to be the movable portion and the bottom portion of the electric pan head 20 that extends from the top surface to the bottom surface of the pan head 20 to be the fixed portion);

first and second support portions erected from the movable portion for supporting the camera unit 10 from the opposite sides thereof for tilt rotation about a rotary shaft (see Fig. 3; Examiner considers the triangular portion extending upward from the top surface of the electric pan head 20 and having a rounded top to be one of

the support portions, and the circle at illustrated toward the top of the support portion to be the tilt rotation shaft);

a first circuit board disposed in the camera unit 10 (see Col. 2, lines 52-6; Here Hosoe teaches the camera unit 10 to comprise a microcomputer, thereby teaching the camera unit 10 to comprise a circuit board);

a second circuit board (see Col. 2, lines 57-60; Here Hosoe teaches the electric pan head 20 to comprise a microcomputer, thereby teaching the electric pan head 20 to comprise a circuit board. Although Hosoe does not teach the second circuit board to be disposed on the fixed portion of the pan head, it would have been an obvious matter of design choice to one having ordinary skill in the art at the time the invention was made to dispose the circuit board of Hosoe on the fixed portion. Applicant has not disclosed that the specific position of the second circuit board with respect to the fixed portion solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with the second circuit board positioned anywhere with respect to the fixed portion); and

a connecting member (cable 2) for connecting the first and second circuit boards together (see Col. 2, line 65, Col. 3, lines 4-8 and Fig. 1, 3; Although Hosoe does not teach the cable 2 to be disposed on the second support portion, it would have been an obvious matter of design choice to one having ordinary skill in the art at the time the invention was made to dispose the cable of Hosoe on any one of the support portions. It is clear from Fig. 3 that the cable 2 must be disposed on either one of the support portions for connecting the circuitry between the camera unit 10 and the pan

head 20). Further, applicant has not disclosed that the specific position of the connecting member with respect to any one of the support portions solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with the cable positioned on either one of the support portions).

Hosoe does not teach the cable 2 to be a flexible flat cable. However, Stiepel et al. disclose a movable camera unit (surveillance device 1) comprising a camera unit (camera and lens assembly 4) and a pan head (carriage assembly 6), wherein the camera and lens assembly 4 is adapted to undergo tilting and panning motion, thereby rendering the surveillance device 1 analogous to the image input apparatus of Hosoe (see Col. 5, lines 62-5, Fig. 1). Stiepel et al. teach the surveillance device 1 to comprise first and second circuit boards, wherein a connecting member (ribbon cable 35) for connecting the first and second boards together is a flexible flat cable, at a least a part of which is disposed in an arcuate shape about a center line of tilt rotation of the camera and lens assembly 4 (see Col. 7, lines 16-23, 36-9, Fig. 4). Here Stiepel et al. teach explicitly the cable 35 to carry electrical signals between the camera and lens assembly 4 and the carriage assembly 6, thereby teaching the a assemblies 4 and 6 each to comprise a circuit board disposed either therein or thereon. Further, Stiepel et al. teach that by winding the cable 35, that is, by forming the cable 35 into a voluted shape, about the tilt axis, damage to the cable 35 caused by bending of the cable 35 can be avoided. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to substitute for the cable of Hosoe the ribbon cable of Stiepel et al. for avoiding damage to the cable.

Hosoe does not teach explicitly the center of gravity of the camera unit 10 to be disposed near the center line of tilt rotation. However, Blackshear discloses a movable camera apparatus comprising a camera unit (camera 30) and a pan head comprising a movable portion (platform 22) having first and second support portions erected therefrom for supporting the camera 30 from the opposite sides thereof for tilt rotation, thereby rendering the apparatus of Blackshear analogous to the image input apparatus of Hosoe (see Col. 4, lines 49-52, Figs. 1 and 2). Blackshear teaches the center of gravity of the camera 30 to be coincident with the intersection of the pan and tilt axes such that the camera 30 is kinematically balanced for rapid pan and tilt movement rates (see Col. 5, lines 4-8). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to position the camera of Hosoe with respect to the center line of tilt rotation as taught by Blackshear for maintaining balance of the camera.

Hosoe does not teach tilt rotation driving means to be provided on the first support portion. However, Blackshear does show rotation driving means (motor 27) to be mounted to one of two support portions as discussed above (see Col. 4, lines 41-2, lines 49-52, Figs. 1 and 2). Therefore, it would have been an obvious matter of design choice to one having ordinary skill in the art at the time the invention was made to incorporate into an image input apparatus as disclosed by Hosoe tilt rotation driving means positioned as taught by Blackshear. Applicant has not disclosed that the specific position of the tilt rotation driving means with respect to the first support portion solves any stated problem or is for any particular purpose and it appears that the invention

would perform equally well with the tilt rotation driving means positioned on any one of the support portions.

With regard to claim 2, Hosoe does not specify to which side of the camera unit as discussed above with respect to claim 1 the circuit board therein is mounted. However, it would have been an obvious matter of design choice to one having ordinary skill in the art at the time the invention was made to position the circuit board disposed in the camera unit of Hosoe at either side of the camera. Applicant has not disclosed that the specific position of the first circuit board with respect to the first and second support portions solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with the first circuit board positioned at either side of the camera, that is, the first support portion side or the second support portion side thereof.

With regard to claim 3, Hosoe teaches the camera unit 10 to include a lens unit, but does not teach the first circuit board to be disposed on the upper side or the lower side of the lens unit in the camera unit 10 (see Col. 6, lines 62-4). However, it would have been an obvious matter of design choice to one having ordinary skill in the art a the time the invention was made to position a circuit board disposed in the camera unit of Hosoe on either side of the lens unit.

With regard to claim 5, although Hosoe does not teach the apparatus 1 as discussed above with respect to claim 1 to further comprise a case member, it is well known in the art to provide for a structure an opening portion for access to circuitry enclosed within the structure and a covering for the opening portion. Therefore, it would

have been obvious to one having ordinary skill in the art at the time the invention was made to provide for the support portion having the cable of Hosoe disposed thereon an opening portion in the outer side thereof, and a case member that is mountable on the opening portion for covering the opening portion.

With regard to claims 6 and 9, see discussion above with respect to claim 1. Hosoe further shows the apparatus 1 as discussed above with respect to claim 1, wherein the camera unit 10 and the movable portion are shaped so that even if the camera unit 10 is rotated to a nearly vertical position about a tilt rotary shaft, the surface of the camera unit 10 may not interfere with the surface of the movable portion (see Fig. 3). The tilt rotary shaft is represented by the circle illustrated toward the top of the triangular support portion.

With regard to claim 7, see discussion above with respect to claim 2.

With regard to claim 8, see discussion above with respect to claim 3.

With regard to claim 10, see discussion above with respect to claim 5.

With regard to claims 11 and 14, see discussion above with respect to claim 1. It is understood that inherent in the structure of the device 1 of Stiepel et al. 1 is the creation of a rotating force by the elasticity of the cable 35 disposed in a voluted shape in a direction opposite to the direction of rotation of the camera and lens assembly 4 by gravity.

With regard to claim 12, see discussion above with respect to claim 2.

With regard to claim 13, see discussion above with respect to claim 3.

With regard to claim 15, see discussion above with respect to claim 5.

With respect to claim 16, Stiepel et al. teach the device 1 as discussed above with respect to claim 11 to further comprise guide means (spool retainer 34) to be provided for guiding at least a part of the cable 35 in an arcuate shape (see Col. 7, lines 16-8). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to include a guide means for the cable of the combined invention of Hosoe and Stiepel et al. for maintaining the at least a portion of the cable in a wound state.

3. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,223,872 to Stiepel et al. in view of U.S. Patent No. 4,341,452 to Korling.

Stiepel et al. disclose a movable camera apparatus comprising :

a camera unit ; and

a pan head comprising a movable portion (mounting member 21) and a fixed portion (carriage assembly 6), and capable of being pan-driven, wherein the mounting member 21 and the carriage assembly 6 have engagement means (couplings 27, 28) engaged with each other for pan rotation, the couplings 27, 28 including a plurality of engaged portions (elements 27a-27c and 28a-28c, respectively) on the circumference about a center of pan rotation (see Col. 5, lines 65-7, Col. 6, lines 39-64, Figs. 1, 2). A center of pan rotation is represented by the dashed line which extends from the element 81 to the element 31 as illustrated in Fig. 2.

Stiepel et al. do not teach the elements 27a-27c and 28a-28c to be formed of a resin material high in lubricity. However, Korling discloses engagement means attachment assembly 22) engaged with each other for pan rotation, wherein the

assembly 22 includes a plurality of engaged portions (washers 50a, 50b), thereby rendering the assembly 22 analogous to the couplings 27 and 28 of Stiepel et al. (see Col. 7, lines 42-4, 59-64, Fig. 11). Here Korling teaches the washers 50a and 50b to be formed of plastic such as nylon, which constitutes a material high in lubricity. Therefore, it would have been obvious to the one having ordinary skill in the art at the time the invention was made to form the engaged portions of Stiepel et al. of a plastic material as taught by Korling for facilitating a pivoting motion.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following patents are provided to further show the state of the art with respect to connecting members:

U.S. Patent No. 5,627,616 to Sergeant et al.

U.S. Patent No. 5,224,675 to Ellenberger et al.

The following patent is provided to further show the state of the art with respect to case members:

U.S. Patent No. 6,134,844 to Cornell et al.

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michelle Nguyen whose telephone number is 703-305-2771. The examiner can normally be reached on M-F 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Russ Adams can be reached on 703-308-2847. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-7723 for regular communications and 703-305-7723 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4900.

RUSSELL ADAMS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800

mpn
September 3, 2002